

**REMARKS**

Claims 1, 3, 4, 5, 6, 8, 9, and 58 are pending in the application.

Claims 2, 7 and 10-57 were previously cancelled.

In this amendment, claims 59-62 also are canceled as the Examiner has withdrawn these claims from consideration in the previous Office Action as being directed to a non-elected invention. Applicants reserve the right to file a divisional application directed to these claims.

Claims 1, 3, 4, 5, 6, 8, and 9 have been amended to comply with C.F.R. § 1.173 for reissue amendments. Entry of the amendment is respectfully requested.

The rejections in the Final Office Action mailed on July 9, 2007, are addressed below.

**1. Defective Oath**

Applicants note that the Second Supplemental Reissue Inventors' Declaration was deemed defective. A further Supplemental Reissue Inventor's Declaration that complies with 37 C.F.R. § 1.175 and that claims priority to Japanese priority document, JP 3-261288, as filed September 13, 1991 will be filed upon indication that the application is otherwise in condition for allowance. Applicants note that priority is also claimed under 35 U.S.C. §365 to PCT/JP92/01146, as filed September 9, 1992.

**2. Claim Rejections Under 35 U.S.C. § 251**

Claims 1, 3-6, 8-9 and 58 are rejected under 35 U.S.C. § 251 as based upon a defective reissue declaration. Applicants respectfully request that this rejection be held in abeyance. This rejection will be satisfied upon the filing of the Supplemental Reissue Inventors' Declaration when the application is otherwise deemed in condition for allowance.

**3. Rejections under Section 112, 1<sup>st</sup> Paragraph**

Claims 1, 3-6, 8-9 and 58 are rejected under 35 U.S.C. §112, first paragraph, as allegedly containing new matter. This rejection is rendered moot in part and is traversed in part.

Claim 1 is currently amended to clarify that the referenced salts are "pharmacologically permissible salts of riboflavin." Support for this amendment is found at the very least at column

3, lines 47-51 of the ‘420 Patent. In view of this amendment, this aspect of the examiner’s rejection under Section 112, 1<sup>st</sup> paragraph is now moot.

With respect to claim 3, the rejection asserts that the language “effective against *E. Coli*” introduces new matter into the application. Applicants respectfully traverse this aspect of the rejection. The application provides support for this recitation. Applicant’s note that the specification states, “Further, no particular limitation is imposed on the kind of the antibiotic used in combination with riboflavin and/or the riboflavin derivative. However, amoxicillin, tetracycline, oxycycline hydrochloride may be mentioned by way of example.” *See*, US 5,945,420, at Col. 4, lines 2-7. The specification further states that amoxicillin is an antibiotic used to treat “various infectious diseases caused by *E. coli*.” As made clear in the Examples, the compositions recited in the claims increase the survival rate after inoculation with *E. coli*. In particular, Example 4 shows a synergistic effect achieved by the combination of riboflavin and an antibiotic, amoxicillin, against *E. coli*. One skilled in the art would thus recognize that the antibiotic administered in combination with “riboflavin, flavin mononucleotide, flavin adenine dinucleotide, or pharmacologically permissible salts of riboflavin” should be one that is effective against *E. coli*.

Moreover, claim 3 is directed to “enhancing the immune response to infection by *E. coli* in a mammal.” One skilled in the art would recognize that the antibiotic administered in such a method includes one that is effective against *E. coli*. As noted in the specification, the combination of “riboflavin, flavin mononucleotide, flavin adenine dinucleotide, or pharmacologically permissible salts of riboflavin” with an antibiotic will achieve a synergistic effect. Such a synergistic effect would not be achieved if the antibiotic also was not effective against *E. coli*. Thus, it would be clear to a person skilled in the art that the specification describes an antibiotic effective against *E. coli*, as recited in claim 3. Such antibiotics are well known and would be readily recognized by a person skilled in the art.

Withdrawal of this aspect of the rejection is thus respectfully requested.

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**CONCLUSION**

In view of the comments presented above, Applicants respectfully submit that all of the rejections and objections contained in the Office Action of March 20, 2008, have been overcome, and all of the pending claims are in condition for allowance.

No fees are believed to be due in association with this submission. However, please charge any payments due or credit any overpayments to our Deposit Account No. 08-0219.

The Examiner is encouraged to telephone the undersigned at the number listed below in order to expedite the prosecution of this application.

Respectfully submitted,

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